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QUEENSLAND

The Brigalow Country as an Asset to the State

by

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Extract from "Report on Progressive Land Settlement in Queensland"
by The Land Settlement Advisory Commission.

S. G. REID, Government Printer, Brisbane.

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Location.

The "brigalow belt" extends some five to six hundred miles in a north-south direction in Queensland from Collinsville to the New South Wales border, and extends another two hundred miles or so southwards into New South Wales. In width the belt extends approximately two hundred miles, but scattered communities may be found outside these limits. The distribution is indicated on the accompanying map, and approximates to twenty-three million acres in area.

Location shown on map.

The major portion of the brigalow country is contained within the 146th and 151st parallels of longitude, and the 21st to the 29th parallels of latitude and lies within the 20-inch and 30-inch isohyets. It is interesting to compare the map of the brigalow areas with the distribution of the prickly pear throughout the State, as mapped by the Prickly-pear Land Commission when it took office in 1924. There is a remarkable similarity, especially between the distribution of the dense brigalow scrub and dense prickly pear.

Brigalow areas correspond closely with dense prickly pear.

Elevation.

Topographically, the brigalow areas occur at altitudes from just above sea level to 1,500 feet with the main occurrence between 500 feet and 1,000 feet. It usually occupies the lower slopes and foothills below the open forest whereas, on relatively flat terrain such as near Warra and Tara, it is found just a few feet higher than the drainage lines occupied by box or coolibah.

Elevation 500 ft. to 1,500 ft.

Geology and Hydrology.

The relationship between the occurrence of brigalow and geology is close, and in Queensland the brigalow appears to have a close connexion with the occurrence of calcareous shales, sandstones and coal measures, and alluvia derived from them. This close association probably explains why the waters underlying most of the brigalow areas are rather deep and of very inferior quality. Occasionally, an artesian flow is obtained, but as the areas form important intake beds for the Great Artesian Basin pressures are usually insufficient to provide flowing bores. Methane or marsh gas often gives a good deal of trouble in the bores sunk into the brigalow areas. Corrosion of windmill pipes is a further hazard. Consequently, most of the water supplies are provided either by natural surface storages or by excavated tanks. The location of tanks is important as the loose self-mulching soil on some of the catchment areas reduces run-off, and on the flatter land the presence of large "melonholes" or "gilgais" may prevent all run-off except that of flood waters. Many tanks are located near harder red ridges scattered throughout the area and these give a rapid and effective run-off.

Associated with calcareous shales and coal measures.

Intake beds for Artesian basin.

Water quality poor.

Surface water storages common.

Characteristics of the Brigalow Tree.

Brigalow is one of several hundred species of Acacia recorded in Australia. Although the species has not been closely studied botantically, there appears to be some considerable strain variation. In scrub formation, where growing on fertile soil, the tree grows very erect to a maximum height of some sixty feet with a dense canopy of leaves at the top. In open formation, it grows into quite a shapely shady tree some twenty-five to thirty-five feet high. On poorer soils or on soils very poorly drained, a dense understorey of whipstick brigalow about ten to fifteen feet high may develop.

Brigalow trees variable.

The usual method of spread is by the production of suckers growing vertically from the roots—a single tree giving rise first to a clump and the clumps merge to form a dense scrub. The production of suckers is greatly increased by the passage of fire, and many mistakes were made by the early settlers who tried to clear brigalow scrub quickly by falling and firing as soon as the fallen material was dry enough to burn. The legacy from such practices can be seen in the thousands of acres of sucker regrowth which cause so much concern to landholders at the present time.

Propagates generally by suckers.

Fire encourages suckering.

The brigalow does not develop a well-defined taproot, the usual root being a "hockey-stick" type resulting from development from suckers. Consequently the tree is generally shallow-rooted and a large proportion of the dead trees fall or can be pushed over easily five years or more after death.

Brigalow is shallow-rooted.

The brigalow is not an important timber species, but is usually freely made use of for rails in stockyard construction. It does not last in the ground and is not used for fence posts. As a firewood the timber is easy to chop, burns readily to a white ash, and produces a hot fire.

Timber of little permanent use.

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VEGETATION ASSOCIATIONS.

Brigalow associated with other species.

The term "brigalow belt" is used in its widest terms. Brigalow can occur as an almost pure stand in thick scrub formation, in scattered clumps in open grassland, or variously associated in scrubs with belar, wilga, box, buddah or "sandalwood," softwood scrubs, bottle-tree, limebush, tea-tree, yapunyah, yellow wood, gidyea and other less important species, including a low-growing understorey made up of currant bush, Ellangowan poison bush and other shrubs.

In Southern Queensland, the usual scrub association is brigalow-belar-wilga, brigalow-box-wilga or brigalow and softwoods. In the Goondiwindi area, a brigalow-belar-limebush association is common, with brigalow-tea-tree in the wetter areas. In the central districts extending from Kalapa westwards to Anakie and from Rolleston north to Clermont and along the Mackenzie River, a brigalow-yellow wood association is dominant with an understorey of currant bush and Ellangowan poison bush. North of Clermont towards the Suttor River a brigalow-gidyea association is found, apparently in response to a higher temperature.

SOILS.

Grows on heavier soils.

The soils of the brigalow country are generally of a heavy nature—clay loams to heavy clays. Within this range, there is considerable variation, often associated with a change in vegetation. The belar soils are generally easier to work than the other types.

Soils of good moisture-holding capacity.

The fact that the soils are of a heavy texture implies that they have quite a good water-holding capacity, and so under cultivation using dry farming techniques they can be made to store adequate quantities of soil moisture under fallow to grow such crops as the winter cereals and the sorghums, sudan grass, and millets during the summer. Under pasture, the available soil moisture permits extended growth within the limits of climatic factors such as the occurrence of heat waves and frost.

Soil fertility generally good.

The fertility of the soils is generally good and few of the brigalow soils so far cultivated have responded markedly to fertilizer application. There is evidence, however, of some deficiency of phosphorus both in soil analyses and in blood tests conducted on cattle grazing such lands, and it is probable that, under continuous cultivation or pasture management, some superphosphate will be required.

Soils build up nitrogen under fallow.

As with most of the heavy soils of the Darling Downs, these brigalow soils under fallow are able to nitrify sufficiently to provide adequate nitrogen for the wheat crops, and satisfactory protein percentages have been obtained in wheat grown on these soils. There is need, however, to adopt careful rotational cropping to maintain a satisfactory position in this regard.

Some isolated copper deficiency has been detected in wools grown in the Tara area, but the condition is only of minor importance.

May be subject to—
1. Loss of structure.
2. Erosion.
3. Melon-holes.
4. Salting.

Four very important characteristics relating to the utilisation of the soils of the brigalow areas must be taken into consideration:—

1. Under continuous cultivation, their structure will eventually break down, they will gradually lose their ability to absorb rainfall and will be more liable to erode.

2. On the undulating relatively shallow brigalow soils around Wandoan there is a serious erosion hazard even in the relatively virgin soils.

3. On the flatter country a feature of a good many of the brigalow soils is the presence of numerous "melonholes" or "gilgais". Such occur also on the black earth plain country, but they appear to reach their maximum development in the brigalow country where melonholes some five feet deep and fifty feet in length may be continuous. The larger melonholes constitute a hazard for cultivation. On the other hand they are important in preventing heavy run-off and must considerably improve the surface and subsoil moisture status of the area.

4. Some of the brigalow soils have been affected by "salt" influence and as such are difficult to work from a physical standpoint and the presence of mineral matter in the surface layers of the soil may hinder plant establishment. These soils are in the minority, but occur in the Yelarbon-Goondiwindi area.

Brigalow belt has great potential.

Despite the abovementioned limitations, the brigalow belt without doubt offers the greatest potential for development for both cropping and pastures of any land yet to be opened up for settlement in this State.

The combination of crops, pastures and stock—or balanced mixed farming—is likely to become the stable form of land use in this region for some considerable time to come. Perhaps with the development of suitable pasture species and an understanding of their effective management the area devoted to crop will, with advantage, decline, but this cannot be fully implemented at present. The introduction of pastures and stock into a rotational cropping programme will, however, preserve soil structure and, in combination with some mechanical aids, minimise soil erosion hazards and reduce the costs associated with cultivation. **Mixed farming probable ultimate use.**

The smaller melonholes can gradually be eliminated by successive cultivation, but the larger ones must remain in pasture. It is important in subdividing land that an adequate area of cultivable land be provided for each block.

Somewhat atypical soils growing brigalow occur at the extremities of the range of the species where whipstick brigalow is more common. The reddish mulga type soil and shallow sandy salt affected soils fall into this category.

The Soils Division of the Commonwealth Scientific and Industrial Research Organisation is currently engaged in the mapping of the brigalow soils in Queensland. **Soil survey in progress.**

LAND USE IN THE BRIGALOW BELT.

The brigalow areas are devoted to dairying and agriculture in the closely settled parts of the State and to sheep and cattle raising in the more distant localities. The distribution of these industries is shown on the map.

Although there has been extensive development in portion of the brigalow country, I estimate that, of the twenty-three million acres under brigalow, some fifteen million still remain untouched. With the introduction of mechanical pulling and aerial spraying during recent years, development has been speeded up, but the recession in wool prices has now made finance for such undertakings difficult to obtain. **Twenty-three million acres involved.**

The main reasons for the slow rate of development hitherto can be traced back to—

(1) The presence of the prickly pear;
(2) The difficulty of removal of the brigalow scrub and later its sucker regrowth;
(3) The generally unsatisfactory stock water supply position;
(4) The lack of finance; and
(5) The tenure of the lease, more particularly after the removal of the prickly pear.

THE PRICKLY PEAR MENACE.

The conquest of the prickly pear by the caterpillar of the moth *Cactoblastis cactorum* is now history and a monument to the value of scientific endeavour applied to problems of the primary industries. Meanwhile our complacency has allowed another cactus, *Harrisia martinii,* to grow unchallenged in the brigalow scrub around Collinsville, which is only now being tackled with the seriousness it deserves. **Prickly pear conquered by cactoblastis.**

The aftermath of rotting and dry fibrous pear debris proved a valuable mulch and source of soil fertility in the early years after clearing, but the effect of this has now been lost and there has been a decline in fertility in these cleared brigalow soils. **Decline in fertility.**

THE REMOVAL OF BRIGALOW SCRUB AND SUCKER REGROWTH.

In its virgin state, brigalow scrub is not useless. There is a certain amount of edible shrub and a sparse picking of brigalow grass and herbage. However, it is difficult country to muster and carrying capacity can be increased greatly by timber destruction. **Brigalow scrub not entirely useless.**

Brigalow scrub was first tackled by falling with an axe and subsequent burning. The pioneers of brigalow clearing soon found, to their cost, that this treatment, more often than not, encouraged vigorous sucker regrowth and the last state was worse than the first. The legacy of suckers from such early burning still poses a problem in present day development. **Early problem of sucker regrowth.**

It was found that ring-barking the brigalow and allowing it to remain for five years without burning was an effective treatment. Further, the ring-barking permitted full development of the ground vegetation of nutritious grasses and herbage, and doubled or quadrupled the carrying capacity. Fire through this rung country before the death of the brigalow immediately **Ring-barking successful but slow.**

encourage sucker growth. Ring-barking is still the safest method of all brigalow treatments where the land is required for pasture without cultivation. It is also the least expensive as an initial treatment. The method, however, is slow, and ring-barkers, apart from the actual owners of the property or their permanent employees, are difficult to engage. Costs are of the order of 25s. to 27s. 6d. per acre.

Flogging suckers with sheep effective.

The graziers of the Goondiwindi District found that sheep could be used to control sucker regrowth if they were shut in a paddock shortly after a burn with adequate watering facilities. Sheep would control the very young suckers, but if rain fell and grass became established they would leave the suckers and take the grass. Old suckers were not eaten by the sheep. In this way, many thousands of acres of brigalow land were brought into natural grasses. It meant adequate fencing and water facilities, but these then remained as permanent improvements. It did prevent the sowing of improved pastures immediately after the burn.

Mechanical pulling, burning and aerial sowing being tried, but has its risks.

Some graziers recently have had the brigalow scrub pulled by two crawler tractors dragging a heavy chain. The cost of such pulling has been of the order of £1–£1 10s. per acre. After pulling, the fallen scrub has been fired and then sown from the air with Rhodes grass about a week afterwards. The cost of Rhodes grass at a minimum of 1 lb. per acre is 4s. 6d. and the cost of the aircraft about 5s. per acre. The Rhodes grass establishes itself well after a burn and *may* keep sucker regrowth in check, but there is no guarantee. If sucker regrowth occurs, a subsequent fire is needed using the drying Rhodes grass to make more effective fire, and possibly a second seeding of grass is required. A small amount of lucerne at about ½ lb. per acre can be added at a cost of 4s. per acre, but Rhodes grass may suppress its early growth and it has given better results introduced later.

Mechanical pulling, burning and ploughing suppresses suckers.

Where brigalow land is being brought into cultivation there is little trouble with suckers. The suckers are quickly suppressed by successive ploughings. The cost to bring an acre of virgin brigalow to the stage of planting the first crop is about £5 per acre.

"Majestic" ploughing effective.

If sucker regrowth has been allowed to develop for some time, the only means of dealing with it, apart from waiting until it is large enough for ring-barking, is to plough it out with a heavy duty plough such as the "Majestic." This means subsequent land preparation and a certain amount of "stick picking" but is an effective method of treatment. The cost of this ploughing operation is approximately £3 15s. per acre.

Other mechanical treatment of suckers.

Rolling young sucker regrowth with a roller fitted with longitudinal blades has effectively dealt with regrowth in some instances.

Chemical treatment of scrub and suckers.

Early chemical treatment was devoted to the control of sucker regrowth. Spraying young suckers or swabbing the cut stump with arsenic pentoxide gave varying results.

Hormone spraying.

A recent development initiated by the Department of Agriculture and Stock in aerial spraying virgin brigalow scrub with hormones 2,4-D and 2,4,5-T mixture has resulted in some success and it would appear that such treatment offers good scope for the destruction of tall virgin brigalow. The results on sucker regrowth have been disappointing and more research is required in this regard. The hormones are also ineffective against the associated timbers—belar and wilga. The cost of treatment by this means is approximately £2–£2 5s. per acre, including the use of the aircraft and the chemical.

STOCK WATER SUPPLIES.

Stock water may be difficult. Gas a problem.

The stock water supply position in the brigalow belt is not good. Generally, sub-artesian waters are deep and brackish and tend to corrode pipes and tanks. In addition, marsh gas is often present in bores in the Wandoan area and creates problems in pumping. Artesian water is a rarity. Surface supplies are usually provided by tanks and dams. In flat melonhole country it may be difficult to get a satisfactory catchment as the melonholes fill but do not run. Water stored in the melonholes will give short-term stock water.

Surface tanks usual supply.

There are harder red ridges through the southern and northern brigalow areas and satisfactory tanks can be constructed. A fully-equipped 3,000 yard tank, mill and troughing costs about £700. Larger tanks would be more effective.

Finance.

The brigalow country is dear land to develop from the natural scrub. There are two methods of approach—a relatively cheap but slow method of hand ring-barking, waiting for five years or so and then burning and grassing down or cultivating; the second, the adoption of large-scale mechanical and/or chemical methods which will bring about improvement and greatly increased carrying capacity quickly. Both methods are expensive in the long run, the former expensive in time and sweat by the individual lessee, the second in capital outlay.

Long-term finance necessary.

It is obvious that, if the brigalow country is to be developed, some satisfactory source of long-term finance must be found, and it would be more convenient if the whole of the finance were provided from the one source rather than involve separate arrangements for land development and stock.

The amount of finance will depend on the size of the holding and the source of livelihood. Most of the dairying areas have already been well-improved and new settlement in dairying is not considered likely unless marketing conditions improve. New development is probable in sheep raising and mixed farming and cattle fattening.

Finance involved.

For sheep raising with dog netting, internal fencing, water facilities, buildings, pulling, burning, grassing and stocking, the cost could eventually be of the order of £7 per acre capital cost on a small holding. If cropping were also carried out, an additional £1–£2 per acre would be added for machinery and up to £3 per acre in some cases for soil erosion control.

A cattle fattening property of fifty thousand acres in the Clermont area, of which 20,000 acres is dense brigalow, has recently been assessed to involve a capital outlay of £100,000 for pulling, grassing, water facilities, dips, fencing, buildings, without stock. A smaller 6,000 acre cattle fattening property in the Miles District using cultivated fodder crops has involved a capital expenditure of £7 10s. per acre.

LIVING AREAS.

The "living area" has been a controversial issue for some time. Dairying areas of 500 to 1,000 acres have provided a reasonable living for most lessees, but with the shift to sheep and cattle fattening along with grain, an increase in acreage is required.

In the areas receiving a fairly reliable winter rain component in an average yearly fall of 25 inches and over, provided with adequate transport, I believe the final pattern will be one of mixed farming based on crops, pastures, with sheep or cattle.

Smaller areas should be freeholded.

In such areas *when fully developed* a holding of 2,500 acres of good brigalow land should be adequate and should be allocated under *freehold* tenure. Pending this full development, it is suggested that an additional area of similar size and contiguous with it be allocated under leasehold tenure, such to be resumed, if conditions at the expiry of the lease are such that the freehold portion has proved an adequate living area. Leasehold conditions could still be applied to this area. In the basic design for settlement, the provision of access roads etc., could be made to fit the above plan.

Where rainfall is less and more unreliable, and transport is not available within easy distance, the areas could be enlarged accordingly for individual lessees.

Areas also to be made available for private finance.

With the tremendous amount of development still to proceed and the shortage of finance, there appears to be a strong case for making the more distant and larger areas of green brigalow country available to private individuals and grazing companies who have the finance to improve it quickly. This is imperative with the threat of the Harrisia cactus moving South from its original point of infestation towards the dense brigalow lands of the Isaacs, MacKenzie, Nogoa, and Comet river systems.

Cattle fattening gives its greatest efficiency where the breeder also becomes the fattener. In this case it is hardly sound to exclude companies which breed on the outside properties and take all of the risks of uncertain rainfall, heavy improvement costs, etc., from obtaining fattening country of good quality nearer the coast so that the young, well-finished beast which the trade requires, can be placed on the market.

By allocating land both to the small and the large lessee, the brigalow country could be developed much more quickly and provide greater national wealth.

THE BRIGALOW COUNTRY FOR DAIRYING AND PIG-RAISING WITH MIXED AGRICULTURE.

Areas 350 to 1,200 acres.

Successful settlement in dairying and pig-raising has taken place in South-Eastern and Central Queensland hinterlands on areas generally from 350 to 1,200 acres in area, and these areas have provided a reasonable living. Costs of development, taken over a long term, have generally been high, but the dairymen were forced to develop the bulk of their holdings. The initial outlay was kept down by using temporary fences, temporary yards, temporary pigsties, and ring-barking and hand-clearing for cultivation until more money was available for better fixtures.

Dairy cattle in good health.

Dairy cattle generally do well in brigalow country with its high soil fertility and good variety of nutritious grasses and herbage.

Rhodes chief pasture grass.

Early establishment of Rhodes grass on newly-burnt brigalow land gave very prolific growth in the initial years and formed a very cheap form of grazing for dairying.

Some deterioration.

Pasture deterioration as a result of the loss of the organic matter accumulated from prickly pear debris, and the absence of a suitable associated legume has set in after a number of years and the land has usually been brought under the plough to grow summer and winter fodder and grain crops.

Other pasture species which perform well in brigalow country include lucerne, green and blue panic, buffel grass and a few new species being tried by C.S.I.R.O.

Summer and winter fodder crops.

In the cultivated brigalow areas sudan grass has been the chief summer fodder for grazing with oats or wheat for winter green feed. These crops grow well after a fallow. On the Darling Downs and Callide Valley, grain sorghum stubble after the grain has been harvested is a valuable fodder during the dry spring months, while in some instances the sweet sorghums have been grown and conserved as silage. Other successful crops for grazing include the millets, cowpeas and lucerne for summer; and barley, canary seed, rape and a spontaneous growth of prairie grass and burr medic in the winter months.

The re-introduction of Rhodes grass, preferably with a legume such as lucerne, into the cropping sequence would give a valuable pasture which would restore soil structure and control erosion on the sloping lands.

Wheat for grain.

Wheat-growing for grain has been carried on by many dairymen in brigalow areas with quite good results. On well-fallowed land and land periodically under pasture, the protein content of the wheat on brigalow soils compares very favourably with that grown on the Darling Downs black soils. Where fallows have not been adequate and where a pasture phase has not been introduced, there is some criticism of the baking quality of the flour.

However, the brigalow lands in South-Eastern and Central Queensland are destined to become major wheat-growing areas and constitute the most likely extension of the overall acreage in this State.

Hazards of cultivation.

The gently-sloping brigalow soils in some areas are subject to erosion by water, and where they are shallow the erosion problem can become serious.

1. *Erosion.*—To protect this land from erosion losses mechanical treatment with graded banks might cost from £2–£3 per acre and this must be taken into consideration when dealing with finance for closer settlement on such lands.

On the flatter land, a common feature is the occurence of melonholes or "gilgais" which vary from almost imperceptible unevenness of the land surface to quite considerable irregular ponds, some four to six feet deep.

2. *Melonholes.*—The smaller melonholes can be levelled by successive ploughings; other larger ones may ultimately be filled by heavier ploughs, graders and bulldozers, but there will be some considerable areas where such levelling will not be feasible. Thus, in any subdivision where cultivation is contemplated, an adequate survey of the extent of cultivable land should be made.

Weed taints.

The varying herbage growth in the brigalow country is inclined to produce a greater amount of weed taint or feed flavours in the milk products than other areas. Most of these can be removed by factory processing and the continued extension of improved pastures or grazing crops will lessen the losses from down-grading such produce.

Dairying future probably restricted.

Although dairy cattle on brigalow lands are generally more healthy and produce better than those on many coastal areas, the distance from factories and freight on butter to the coast, together with the general decline in the price of dairy products is likely to restrict the extension of dairying into new brigalow areas.

Successful dairy settlement.

Successful establishment of dairying in the Boonah, Lowood, Killarney, Moola, Warra, Chinchilla, Miles, Jandowae, Proston, Mundubbera, Monto, Biloela, Mt. Larcom and Rockhampton areas indicates the valuable part the brigalow areas have already played, and should economic conditions change there is plenty more of such land for expansion.

The Brigalow Country for Sheep-raising.

In the sheep country, the holdings were much more extensive than in the dairying areas and the development was not as rapid. However, where capital was available, ring-barking was carried out with subsequent clearing and limited cultivation. The provision of water and fencing against dingo attack made heavy demands on the grazier's purse, and so brigalow clearing lagged somewhat behind. Where money and labour were available, considerable improvement was effected, especially in lands adjacent to existing rail and road facilities. Lack of access roads to remote areas and the great cost of all-weather road construction in this heavy soil brigalow country also hindered development. **Water and dingo fencing expensive.**

The pioneers of the sheep industry in the Goondiwindi District developed the technique of brigalow sucker control by flogging with sheep, and this is still a very effective practice where cultivation is not being done. **Control of suckers by sheep.**

In the cleared country, regrowth of limebush and tea-tree, both difficult bushes to eradicate, is causing some concern. The brigalow country, once cleared, fenced and watered, is very good sheep country. While natural pasture will continue to provide good grazing, it is envisaged that the large tract of brigalow country in the Southern sheep areas of the State will develop a land use involving a balance between wool-growing on improved pastures, cropping for fat lamb production, and grain production for sale. Sufficient cultivable land should be included in each block to adequately employ a suite of machinery plus the operator. This would be in the vicinity of 500 acres. **Mixed farming envisaged.**

The sheep country within the brigalow belt is fortunate in that it has a reliable rainfall, well-distributed, with a definite winter component. This allows for a long pasture growing season and a reasonably safe programme of summer and winter cropping in conjunction with fallowing. **Well-distributed rainfall.**

The Brigalow Country for Cattle-raising.

The brigalow belt in the cattle-raising country is for the most part undeveloped. A few cattlemen have carried out ring-barking and aerial spraying; some have planted Rhodes grass to improve the carrying capacity. Much more activity is now in evidence with the rise in beef cattle prices. Lower prices for beef cattle until recently have prevented cattlemen from spending large sums of money on improvements, and the lack of labour for ring-barking has further hindered progress. **Cattle country little improved.**

Cattle can make good use of brigalow country. The scrub trees and shrubs provide a good deal of edible forage and feed can be pulled or knocked down and eaten by the cattle. The dense growth also provides shelter in winter. It is undesirable that all timber be ring-barked or pulled, but suitable belts for shade and wind protection should be retained, and this should be considered when arranging for mechanical pulling. **Shelter and shade needed.**

The undeveloped brigalow areas adjacent to transport should be parcelled out to individual lessees in adequate living areas. The cost of development of these areas will involve heavy capital expenditure and provision will have to be made for long-term credit to enable these lessees to fully develop the holdings. **Long-term credit needed.**

The brigalow areas of the Isaacs, MacKenzie, Comet, Suttor and Bowen river frontages are subject to some flood hazard, but the greatest present hazard is the encroachment of the Harrisia cactus. As this cactus appears to develop much more quickly in the scrub areas than out in the open, an obvious first treatment in its control in infested areas, and areas likely to become infested, is the pulling of the scrub. This will cost from £1–£1 10s. per acre. Having pulled the scrub, it will need to be burnt and grassed down. This will involve, with aerial sowing, another £1 per acre at least. The additional costs of fencing, water improvements, dips and stock will bring the total cost per acre in excess of £5. For this reason, it would appear that, in the undeveloped brigalow country to the north, considerable finance will be required—much more than is available from the normal sources. **Costly development. Menace of Harrisia cactus.**

The obvious use of the improved brigalow country in these areas will be to finish younger quality cattle bred further inland, for the local and export market. The most economical method of fat cattle production is for the breeder of the store bullock to continue as the fattener, and land must be made available for these larger operators with their own sources of capital to develop this country initially, and also continue to hold an area adequate for their fattening purposes when developed. **Provision for the large operator.**

Meanwhile, some basic urgent and determined research is required to find an adequate means of eradicating the Harrisia cactus before further valuable areas become enveloped.

The Future.

The brigalow country constitutes the greatest potential of any land for development in this State. Government and private capital developing the smaller and larger holdings simultaneously can bring about a continuing increase in national wealth and more quickly lead to full development.

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